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BEFORE THE

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C.

In re:

AMENDMENT OF SECTION 73.622(b)	)	
TABLE OF ALLOTMENTS	)	MM Docket No.
DTV BROADCAST STATIONS	)	
ORONO, MAINE	)	

TO: Chief, Allocations Branch
Policy and Rules Division

PETITION FOR RULEMAKING

Maine Public Broadcasting Corporation ("MPBC"), licensee of noncommercial educational station WMEB-TV ("WMEB"), Channel *12, Orono, Maine, by its attorneys and pursuant to the Commission's Rules, hereby requests that the Commission institute a rulemaking proceeding to amend Section 73.622(b) of its Rules to substitute DTV Channel *9 in lieu of DTV Channel *22 as WMEB's paired digital channel in Orono, Maine. This substitution of paired digital channels would serve the public interest. In addition, as the attached technical documentation demonstrates, WMEB's proposed operation on Channel *9 will not cause impermissible interference to any other stations.

MPBC proposes the following amendment to Section 73.622(b) of the Commission's Rules:

Community	Present	Proposed
Orono, Maine	*22	*9

In support of this petition, MPBC submits the following:

A. A Petition for Rulemaking is the Only Available Avenue of Relief for MPBC

MPBC has operated noncommercial educational station WMEB on Channel *12 at Orono since 1963, providing high quality educational, informational and cultural programming, including children's programming, to the Orono, Maine area, which includes the Bangor metropolitan area. In the *Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders*, in the Advanced Television Proceeding, MM Docket No. 87-268, FCC 98-315 (released December 18, 1998), the Commission allocated Channel *22 for WMEB. MPBC proposes to substitute DTV Channel *9 instead of DTV Channel *22 at Orono, Maine. As demonstrated in the attached Engineering Statement prepared by MPBC's consulting engineer, DTV Channel *9 will work at a proposed new transmitter site, assuming a power/height combination of no more than 15kw/490m AMSL.

B. The Proposed Change to the Table of Allotments Will Serve the Public Interest

The proposed change to the DTV Table of Allotments will serve the public interest by enhancing WMEB's ability to provide high quality noncommercial educational programming.

The proposed substitution will allow MPBC to preserve its limited resources. By necessity, as a noncommercial educational licensee operating a statewide radio and television network with a limited budget of $11,000,000, MPBC must be a careful steward of its resources, even while it seeks to offer the highest quality of public broadcasting service. MPBC has looked forward to the early, innovative activation of DTV facilities. In fact, Station WCBB-DT, in Augusta, Maine, which is licensed to MPBC, began digital television operations in January, 2000. The allocation of Channel *22 as its paired DTV channel, however, has created enormous obstacles to the achievement of its goals. Substantial hardship will be inflicted upon MPBC if it

is required to activate its DTV channel on UHF Channel *22. Operation of that DTV station with power levels of 990.7 kw as contemplated by the Commission will result in additional electrical power costs of approximately $262,800 per year. Instead, if VHF DTV Channel *9 is used, WMEB's electrical powers costs would be approximately $15,768 per year, a savings of $247,000 or 2.5% of MPBC's annual budget. This savings is extremely significant, especially when considering that MPBC has four additional DTV stations to operate and maintain.

Besides the increased electrical power costs, operation of WMEB on DTV Channel *22 would require MPBC to upgrade the electrical service at the site. The service currently provided is inadequate for any increased power operations. Thus, new lines, transformers, and other associated equipment would have to be installed to handle the power increase. However, because operation on DTV Channel *9 would require less power, this new equipment may not need to be installed. Also, the lower electrical usage would reduce the cost of electrical work required in breakers and metering.

Besides the enormous cost savings operation on Channel *9 would provide, the primary reason MPBC proposes to substitute Channel *9 for Channel *22 is the propagation of hi-VHF versus UHF. Because the VHF Channel *9 power levels are lower, it is less susceptible to terrain and vegetation blockage, which would allow WMEB to replicate its existing coverage area from the beginning without a substantial cost investment.

In an effort to further conserve its limited resources, MPBC proposes to relocate WMEB to a new community tower. Use of this tower will allow MPBC to share tower costs, site maintenance, and test equipment with the other tower users. The tower users will also share expertise and allow for further cooperative efforts. For instance, the proposed community tower users, including MPBC, have begun talks about sharing a satellite truck. Use of this truck would

allow MPBC to provide more local programming from remote areas. MPBC could not afford to do this by itself. Accordingly, the operation on DTV Channel *9 from a new community tower will enable WMEB to operate with significantly lower costs for transmitter, antenna, transmission line, and AC power consumption.

C. The Proposed Change to the Table of Allotments Will Not Result in Impermissible Interference with Surrounding Stations.

Under Section § 73.622(f)(5) of the Commission Rules, an existing licensee with DTV allotment may seek a change in the station's channel if the licensee demonstrates that the change "complies with the technical criteria in §73.623(c), and thereby will not result in new interference exceeding the *de minimis* standard set forth in that section . . ." In accordance with these rules, MPBC requests that the Commission substitute DTV Channel *9, at a power/height combination of no more than 15kw/490m AMSL, for DTV Channel *9. As the engineering statement accompanying this petition demonstrates, the proposed operation of WMEB-DT on Channel *9 with ERP of 15 kw and HAAT of 370 m would in fact result in no impermissible interference to any other station.

CONCLUSION

For all of these reasons, MPBC requests that the Commission institute a rulemaking proceeding to amend Section 73.622 of its Rules to substitute DTV Channel *9 for DTV Channel *22 as the paired channel for WMEB in Orono, Maine. If the Commission grants this petition

and modifies the DTV Table of Allotments accordingly, WMEB is committed to applying for and constructing its DTV station on Channel *9.

Respectfully Submitted,

MAINE PUBLIC BROADCASTING CORPORATION

By: _____

Todd D. Gray
Margaret L. Miller
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April 24, 2000

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I, Robert Gardiner, hereby declare under penalty of perjury that the foregoing facts set forth in this Petition for Rulemaking to amend Section 73.622 of the Commission's Rules are true and correct to the best of my knowledge and belief.

By: _____

Title: President

Date: 4/20/00

ENGINEERING REPORT
PETITION FOR RULE MAKING
TO AMEND SECTION 73.622
OF THE FCC RULES BY SUBSTITUTING
VHF DTV CHANNEL 9 FOR UHF DTV CHANNEL 22
AT ORONO, MAINE

APRIL 2000

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

Warren M. Powis, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer of the University of Canterbury, New Zealand, a Registered Professional Engineer in the District of Columbia, the State of Virginia, the State of South Carolina, and Vice President of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005; previously employed for 15 years with the New Zealand Broadcasting Corporation; a member of the Institution of Professional Engineers New Zealand (IPENZ), the Association of Federal Communications Consulting Engineers (AFCCE), and the National Society of Professional Engineers (NSPE).

That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and,

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

Warren M. Powis
District of Columbia
Professional Engineer
Registration No. 8339

Subscribed and sworn to before me this 11th day of April, 2000.

Notary Public

My Commission Expires: 2/28/2003

This engineering report has been prepared on behalf of Maine Public Broadcasting Corporation (MPBC), licensee of non-commercial educational television station WMEB-TV, Channel 12*, Orono, Maine, in support of its petition for rule making to amend Section 73.622(b) of the FCC Rules and Regulations. In the original DTV Table of Allotments adopted by the Commission in Appendix B of the Memorandum, Opinion and Order on Reconsideration of the Sixth Report and Order in MM Docket No. 87-168[1], WMEB-TV was allotted UHF Channel 22* for its DTV channel at its licensed NTSC site. MPBC proposes to substitute DTV Channel 9* instead of DTV Channel 22* at Orono, Maine, as an amendment to FCC Rule Section 73.622(b) as follows:

Orono, Maine

Section 73.622(b); Substitute DTV Channel 9* for Channel 22*

The reference coordinates for the proposed DTV allotment are changed to a new WABI/WMEB community tower at the following location:

NAD-27

North Latitude: 44° 42' 13"

West Longitude: 69° 04' 47"

Allocation Situation

Tables II and III show the allocation situation for the proposed DTV Channel 9* allotment.

It is proposed to operate the Channel 9* allotment with a maximum directional ERP of 15 kW with a radiation center of 490 meters AMSL. WMEB will serve its principal community with greater

[1]Adopted February 17, 1998, Released February 23, 1998.

*Non-commercial educational allotment.

than 36 dBu predicted signal level. The attached Table I shows the area and population that may receive interference from the proposed operation. Table I indicates the potential interference population will not exceed the Commission's guidelines provided in its Public Notice dated August 10, 1998 (Additional Application Processing Guidelines for Digital Television (DTV)). Therefore, the proposed operation would not have any adverse impact on the existing analog or proposed DTV allotments.

The proposed directional antenna was also based on protection of Canadian TV stations at the United States/Canadian border assuming a minimum Canadian NTSC signal level of 56 dBu a D/U ratio of 33.8 dB and a receive-antenna front/back ratio of 12 dB contained in the draft agreement. The proposed F(50,10) 34.2 dBu contour (56 dBu-33.8 dB+12 dB) does not reach the Canadian border.

Reasons for Channel Substitution

The proposed channel substitution will enable MPBC to operate with significantly lower costs for transmitter, antenna, transmission line, and AC power consumption.

Accordingly, the proposed Channel 9* DTV substitution will enable MPBC to bring a new digital non-commercial television service to the greater Orono, Maine, area while reducing operational and capital costs. The proposed channel substitution, therefore, would serve the public interest.

TABLE I
INTERFERENCE ANALYSIS
WMEB-DT, ORONO, MAINE
APRIL 2000

A study of predicted interference caused by the proposed WMEB-DT service has been performed using a version of the Longley-Rice program as described in OET Bulletin No. 69 (July 2, 1997) and the Public Notice, "Additional Application Processing Guidelines for Digital Television (DTV)" (August 1998). The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Windows98/Intel platform. Comparison of service/interference areas and populations indicates that this model closely matches the FCC's evaluation program. Best efforts have been made to use data and calculations identical to the FCC's program. Any slight differences are attributable to compiler, operating system and/or processor characteristics. The effect of any variance in calculated population values versus the FCC's program is minimized when differencing a given model's results, e.g., new interference equals total interference less baseline interference. The effect is further reduced for ratios of calculated population values, e.g., incremental population affected as a percent of total population served. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 4 km^2 using 3-second terrain data sampled approximately every 0.1 km at one degree azimuth intervals with 1990 census centroids.

Baseline WMEB-DT: Allotment, CH.22, 990.7 kW, 302 meters HAAT,
N44°45'36"Lat.,W68°33'59"Long. (NAD-27)

Proposed Change: Directional, CH.9, 15 kW (max), 375 meters HAAT,
N44°42'13"Lat., W69°04'47"Long. (NAD-27)

Affected Station	Appendix B	Distance/Bearing	Interference (% of Population Served)
WMUR-TV, CH.9 Manchester, NH Lic.282 kW, 314M HAAT	0.0% new interference	277.9 km/227.3°	0.2%
WCBB-TV, CH.10 Augusta, ME Lic.316 kW, 305 M HAAT	0.0% new interference	96.0 km/230.8 km	0.8%

TABLE II
DTV TO NTSC VHF-TV ALLOCATION SITUATION
FOR THE PROPOSED SUBSTITUTION OF DTV
CHANNEL 9* FOR CHANNEL 22* AT
ORONO, MAINE
APRIL 2000

Channel	Call	City/State	Geographic Coordinates	Separation km
9	WMEB-DT	Orono, ME	44°42'13" 69°04'47"	–
8	WMTW App.	Poland Spring, ME	43°50'44" 70°45'43"	164.7
8	WMTW Lic.	Poland Spring, ME	44°16'13" 71°18'13"	183.3
9	CKLT-TV	Saint John, NB	45°28'39" 66°14'02"	240.0
9	CKSH-TV	Sherbrooke, QU	45°18'43" 72°14'32"	258.3
9	WMUR-TV	Manchester, NH	42°58'59" 71°35'19"	277.9
9	CIMT-TV	Riviere-Du-Loup, QU	47°35'03" 69°22'10"	321.0
9	Allot.	Bridgewater, NS	44°23'17" 64°40'47"	351.4
9	CBMET	La Tuque, QU	47°25'25" 72°45'49"	415.5
9	CBAFT7	Campbellton, NB	48°04'58" 66°34'53"	421.9
9	Allot.	Ville De La Baie, QU	48°20'00" 70°53'00"	426.6
10	WCBB	Augusta, ME	44°09'16" 70°00'37"	96.0

TABLE III
DTV TO DTV VHF-TV ALLOCATION SITUATION
FOR THE PROPOSED SUBSTITUTION OF DTV
CHANNEL 9* FOR CHANNEL 22* AT
ORONO, MAINE
APRIL 2000

Channel	Call	City/State	Geographic Coordinates	Separation km
9	WMEB-DT	Orono, ME	44°42'13" 69°04'47"	–
8	None within 225 km			
9	None within 450 km			
10	CBVT-DT	Beauceville, QU	46°13'42" 70°45'28"	214.3

TABLE IV
DTV COVERAGE DATA
WMEB-DT, ORONO, MAINE
APRIL 2000

Radial N ° E, T	Effective* Height meters	ERP kW	Distance to 36 dBu F(50,90) Contour km
0	407	4.13	93.1
45	418	2.80	90.8
90	392	3.72	91.4
135	385	9.94	98.6
180	353	15.0	99.5
225	267	10.04	90.9
270	384	3.68	90.8
315	395	2.70	89.1

*Based on NGDC 30-second terrain data base.

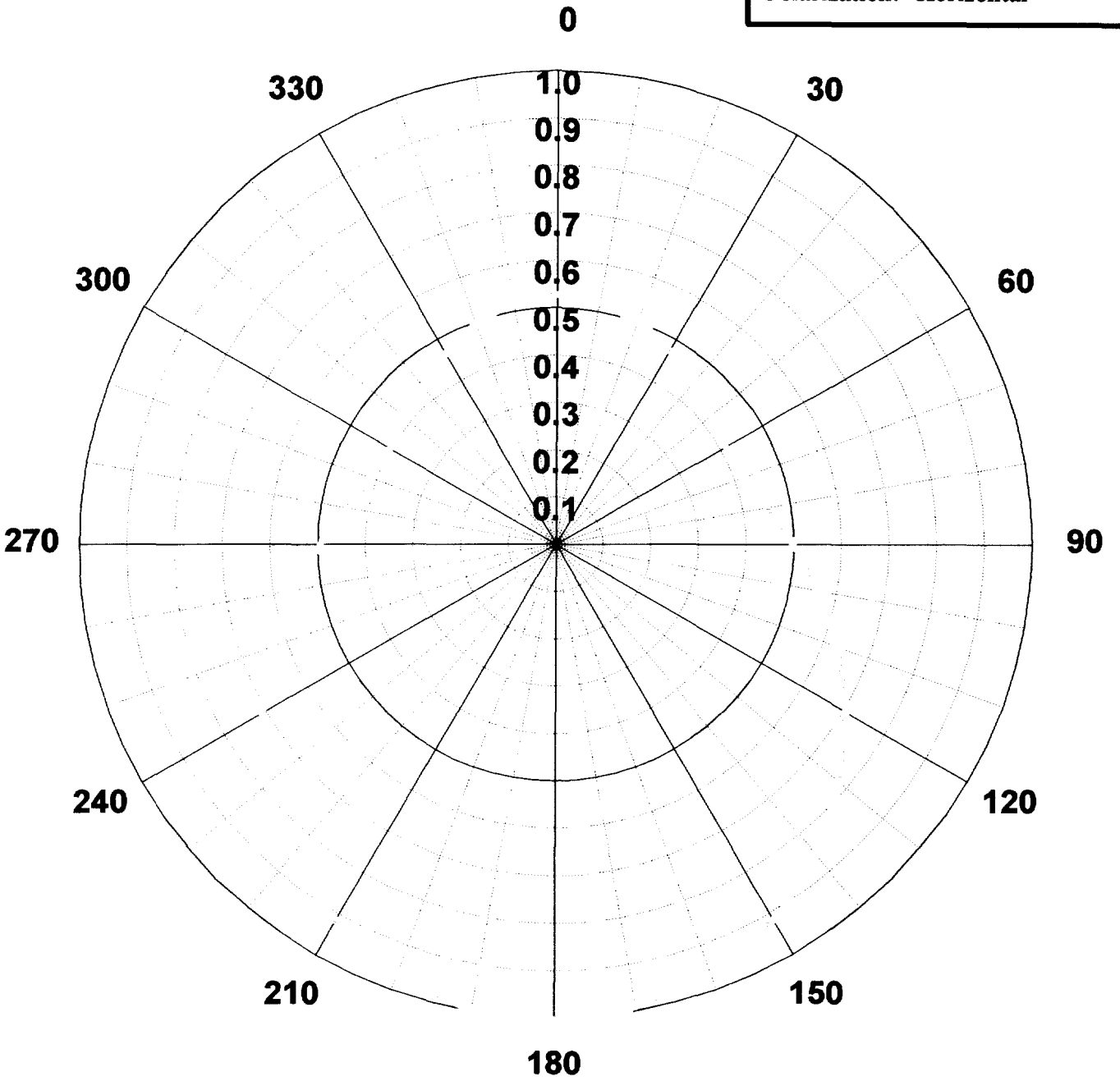
DTV Channel 9 (186-192 MHz)
Average Elevation 3 to 16 km 115 meters AMSL
Center of Radiation 490 meters AMSL
Antenna Height Above Average Terrain 375 meters
Site Elevation 360 meters AMSL
Max. Effective Radiated Power 15 kW

(NAD-27)

North Latitude: 44° 42' 13"
West Longitude: 69° 04' 47"

ANDREW

Channel: 9
Type: ATW-NC
Gain: 2.8 (4.47 dB)
Polarization: Horizontal



ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

Company: MPBC
Site:
Proposal Number:
Author:
Date: 4/5/2000

ANDREW

Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB
0	0.525	-5.60	72	0.424	-7.45	144	0.878	-1.13	216	0.878	-1.13	288	0.418	-7.58
1	0.524	-5.61	73	0.426	-7.41	145	0.884	-1.07	217	0.871	-1.20	289	0.415	-7.64
2	0.524	-5.61	74	0.429	-7.35	146	0.891	-1.00	218	0.865	-1.26	290	0.413	-7.68
3	0.524	-5.61	75	0.432	-7.29	147	0.897	-0.94	219	0.858	-1.33	291	0.411	-7.72
4	0.524	-5.61	76	0.436	-7.21	148	0.904	-0.88	220	0.852	-1.39	292	0.409	-7.77
5	0.523	-5.63	77	0.439	-7.15	149	0.910	-0.82	221	0.845	-1.46	293	0.408	-7.79
6	0.522	-5.65	78	0.442	-7.09	150	0.915	-0.77	222	0.839	-1.52	294	0.407	-7.81
7	0.521	-5.66	79	0.446	-7.01	151	0.920	-0.72	223	0.832	-1.60	295	0.405	-7.85
8	0.520	-5.68	80	0.450	-6.94	152	0.926	-0.67	224	0.825	-1.67	296	0.404	-7.87
9	0.519	-5.70	81	0.454	-6.86	153	0.931	-0.62	225	0.818	-1.74	297	0.403	-7.89
10	0.518	-5.71	82	0.458	-6.78	154	0.936	-0.57	226	0.811	-1.82	298	0.403	-7.89
11	0.516	-5.75	83	0.462	-6.71	155	0.941	-0.53	227	0.804	-1.89	299	0.403	-7.89
12	0.515	-5.76	84	0.467	-6.61	156	0.946	-0.48	228	0.797	-1.97	300	0.403	-7.89
13	0.513	-5.80	85	0.472	-6.52	157	0.950	-0.45	229	0.790	-2.05	301	0.403	-7.89
14	0.511	-5.83	86	0.477	-6.43	158	0.954	-0.41	230	0.783	-2.12	302	0.403	-7.89
15	0.509	-5.87	87	0.482	-6.34	159	0.958	-0.37	231	0.775	-2.21	303	0.404	-7.87
16	0.508	-5.88	88	0.487	-6.25	160	0.962	-0.34	232	0.768	-2.29	304	0.405	-7.85
17	0.506	-5.92	89	0.492	-6.16	161	0.965	-0.31	233	0.760	-2.38	305	0.406	-7.83
18	0.504	-5.95	90	0.498	-6.06	162	0.969	-0.27	234	0.753	-2.46	306	0.407	-7.81
19	0.501	-6.00	91	0.503	-5.97	163	0.972	-0.25	235	0.745	-2.56	307	0.408	-7.79
20	0.499	-6.04	92	0.509	-5.87	164	0.975	-0.22	236	0.738	-2.64	308	0.410	-7.74
21	0.497	-6.07	93	0.515	-5.76	165	0.977	-0.20	237	0.730	-2.73	309	0.411	-7.72
22	0.495	-6.11	94	0.521	-5.66	166	0.980	-0.18	238	0.723	-2.82	310	0.413	-7.68
23	0.492	-6.16	95	0.527	-5.56	167	0.982	-0.16	239	0.715	-2.91	311	0.415	-7.64
24	0.490	-6.20	96	0.533	-5.47	168	0.985	-0.13	240	0.708	-3.00	312	0.417	-7.60
25	0.487	-6.25	97	0.539	-5.37	169	0.987	-0.11	241	0.700	-3.10	313	0.419	-7.56
26	0.485	-6.29	98	0.546	-5.26	170	0.989	-0.10	242	0.693	-3.19	314	0.422	-7.49
27	0.482	-6.34	99	0.552	-5.16	171	0.991	-0.08	243	0.685	-3.29	315	0.424	-7.45
28	0.479	-6.39	100	0.559	-5.05	172	0.992	-0.07	244	0.677	-3.39	316	0.426	-7.41
29	0.476	-6.45	101	0.566	-4.94	173	0.994	-0.05	245	0.669	-3.49	317	0.429	-7.35
30	0.474	-6.48	102	0.573	-4.84	174	0.995	-0.04	246	0.662	-3.58	318	0.432	-7.29
31	0.471	-6.54	103	0.579	-4.75	175	0.996	-0.03	247	0.654	-3.69	319	0.434	-7.25
32	0.468	-6.60	104	0.586	-4.64	176	0.997	-0.03	248	0.647	-3.78	320	0.437	-7.19
33	0.465	-6.65	105	0.593	-4.54	177	0.998	-0.02	249	0.639	-3.89	321	0.440	-7.13
34	0.463	-6.69	106	0.600	-4.44	178	0.999	-0.01	250	0.632	-3.99	322	0.443	-7.07
35	0.460	-6.74	107	0.607	-4.34	179	1.000	0.00	251	0.624	-4.10	323	0.445	-7.03
36	0.457	-6.80	108	0.615	-4.22	180	1.000	0.00	252	0.616	-4.21	324	0.448	-6.97
37	0.454	-6.86	109	0.622	-4.12	181	1.000	0.00	253	0.609	-4.31	325	0.451	-6.92
38	0.452	-6.90	110	0.629	-4.03	182	1.000	0.00	254	0.602	-4.41	326	0.454	-6.86
39	0.449	-6.96	111	0.636	-3.93	183	0.999	-0.01	255	0.594	-4.52	327	0.457	-6.80
40	0.446	-7.01	112	0.643	-3.84	184	0.999	-0.01	256	0.587	-4.63	328	0.460	-6.74
41	0.443	-7.07	113	0.650	-3.74	185	0.998	-0.02	257	0.580	-4.73	329	0.463	-6.69
42	0.441	-7.11	114	0.658	-3.64	186	0.998	-0.02	258	0.573	-4.84	330	0.466	-6.63
43	0.438	-7.17	115	0.665	-3.54	187	0.996	-0.03	259	0.566	-4.94	331	0.469	-6.58
44	0.435	-7.23	116	0.673	-3.44	188	0.995	-0.04	260	0.559	-5.05	332	0.472	-6.52
45	0.432	-7.29	117	0.680	-3.35	189	0.993	-0.06	261	0.552	-5.16	333	0.475	-6.47
46	0.430	-7.33	118	0.688	-3.25	190	0.992	-0.07	262	0.545	-5.27	334	0.478	-6.41
47	0.428	-7.37	119	0.695	-3.16	191	0.990	-0.09	263	0.538	-5.38	335	0.481	-6.36
48	0.426	-7.41	120	0.703	-3.06	192	0.988	-0.10	264	0.532	-5.48	336	0.484	-6.30
49	0.424	-7.45	121	0.710	-2.97	193	0.985	-0.13	265	0.525	-5.60	337	0.486	-6.27
50	0.422	-7.49	122	0.718	-2.88	194	0.983	-0.15	266	0.519	-5.70	338	0.489	-6.21
51	0.420	-7.54	123	0.725	-2.79	195	0.980	-0.18	267	0.513	-5.80	339	0.492	-6.16
52	0.418	-7.58	124	0.733	-2.70	196	0.978	-0.19	268	0.507	-5.90	340	0.495	-6.11
53	0.416	-7.62	125	0.740	-2.62	197	0.974	-0.23	269	0.501	-6.00	341	0.497	-6.07
54	0.415	-7.64	126	0.748	-2.52	198	0.971	-0.26	270	0.495	-6.11	342	0.500	-6.02
55	0.414	-7.66	127	0.755	-2.44	199	0.967	-0.29	271	0.489	-6.21	343	0.502	-5.99
56	0.413	-7.68	128	0.763	-2.35	200	0.964	-0.32	272	0.484	-6.30	344	0.504	-5.95
57	0.412	-7.70	129	0.770	-2.27	201	0.959	-0.36	273	0.478	-6.41	345	0.506	-5.92
58	0.412	-7.70	130	0.778	-2.18	202	0.955	-0.40	274	0.473	-6.50	346	0.509	-5.87
59	0.411	-7.72	131	0.785	-2.10	203	0.950	-0.45	275	0.468	-6.60	347	0.511	-5.83
60	0.411	-7.72	132	0.793	-2.01	204	0.946	-0.48	276	0.463	-6.69	348	0.513	-5.80
61	0.411	-7.72	133	0.800	-1.94	205	0.941	-0.53	277	0.458	-6.78	349	0.514	-5.78
62	0.411	-7.72	134	0.807	-1.86	206	0.936	-0.57	278	0.454	-6.86	350	0.516	-5.75
63	0.411	-7.72	135	0.814	-1.79	207	0.931	-0.62	279	0.449	-6.96	351	0.518	-5.71
64	0.412	-7.70	136	0.822	-1.70	208	0.926	-0.67	280	0.445	-7.03	352	0.519	-5.70
65	0.413	-7.68	137	0.829	-1.63	209	0.920	-0.72	281	0.441	-7.11	353	0.520	-5.68
66	0.414	-7.66	138	0.837	-1.55	210	0.915	-0.77	282	0.437	-7.19	354	0.521	-5.66
67	0.415	-7.64	139	0.844	-1.47	211	0.909	-0.83	283	0.433	-7.27	355	0.522	-5.65
68	0.416	-7.62	140	0.851	-1.40	212	0.903	-0.89	284	0.430	-7.33	356	0.523	-5.63
69	0.418	-7.58	141	0.858	-1.33	213	0.897	-0.94	285	0.427	-7.39	357	0.523	-5.63
70	0.420	-7.54	142	0.865	-1.26	214	0.891	-1.00	286	0.424	-7.45	358	0.524	-5.61
71	0.422	-7.49	143	0.872	-1.19	215	0.884	-1.07	287	0.421	-7.51	359	0.524	-5.61

ANDREW CORPORATION
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Site: **Author:**
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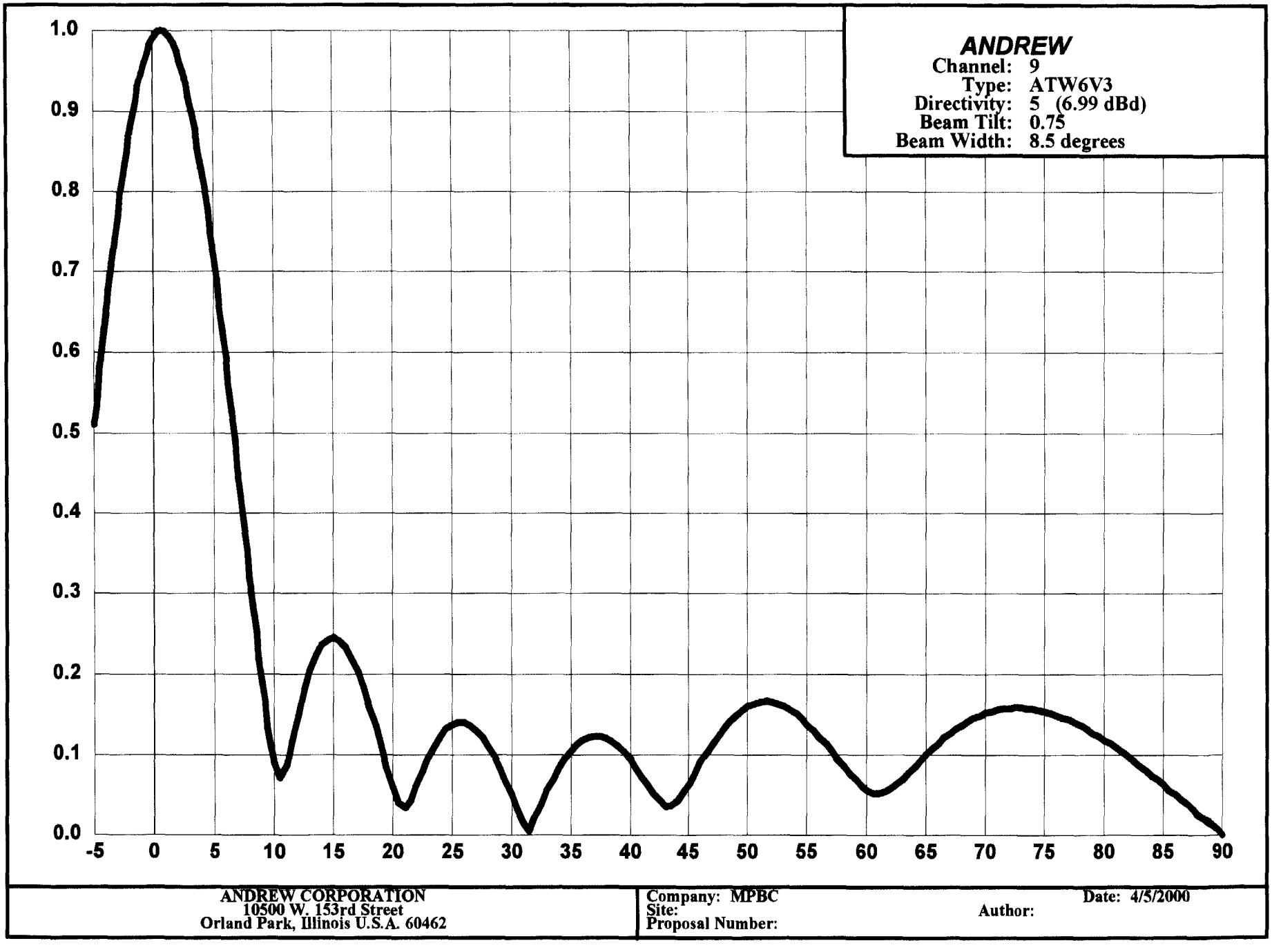

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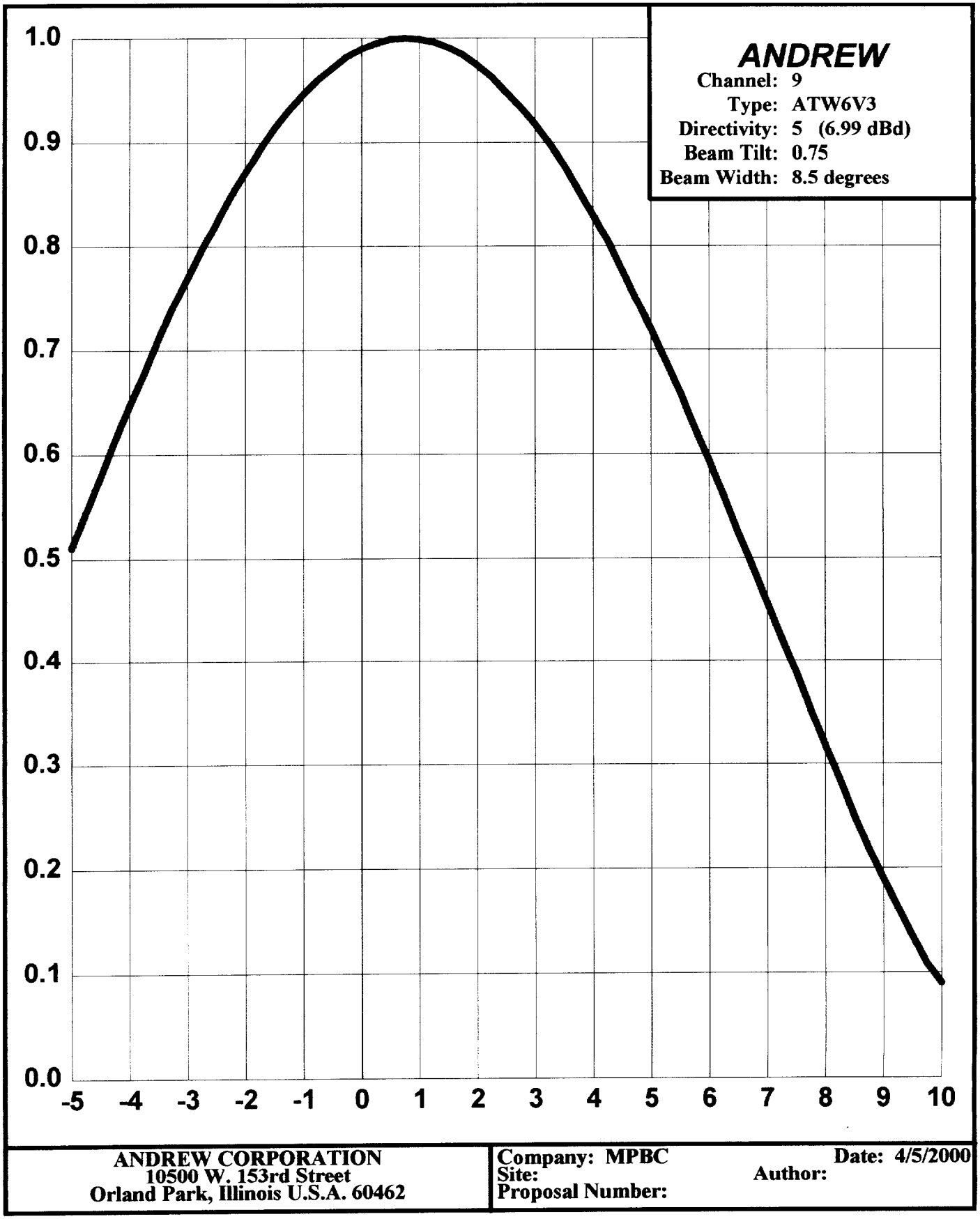

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ANDREW

Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB
-5.00	0.510	-5.85	9.00	0.190	-14.42	36.00	0.118	-18.56	63.50	0.078	-22.16
-4.75	0.545	-5.27	9.25	0.161	-15.86	36.50	0.121	-18.34	64.00	0.085	-21.41
-4.50	0.579	-4.75	9.50	0.133	-17.52	37.00	0.123	-18.20	64.50	0.093	-20.63
-4.25	0.613	-4.25	9.75	0.109	-19.25	37.50	0.123	-18.20	65.00	0.100	-20.00
-4.00	0.646	-3.80	10.00	0.089	-21.01	38.00	0.120	-18.42	65.50	0.108	-19.33
-3.75	0.678	-3.38	10.50	0.071	-22.97	38.50	0.116	-18.71	66.00	0.114	-18.86
-3.50	0.710	-2.97	11.00	0.087	-21.21	39.00	0.110	-19.17	66.50	0.121	-18.34
-3.25	0.740	-2.62	11.50	0.118	-18.56	39.50	0.103	-19.74	67.00	0.127	-17.92
-3.00	0.769	-2.28	12.00	0.151	-16.42	40.00	0.094	-20.54	67.50	0.132	-17.59
-2.75	0.797	-1.97	12.50	0.180	-14.89	40.50	0.083	-21.62	68.00	0.137	-17.27
-2.50	0.823	-1.69	13.00	0.204	-13.81	41.00	0.072	-22.85	68.50	0.142	-16.95
-2.25	0.848	-1.43	13.50	0.223	-13.03	41.50	0.061	-24.29	69.00	0.146	-16.71
-2.00	0.871	-1.20	14.00	0.236	-12.54	42.00	0.050	-26.02	69.50	0.149	-16.54
-1.75	0.893	-0.98	14.50	0.243	-12.29	42.50	0.041	-27.74	70.00	0.152	-16.36
-1.50	0.912	-0.80	15.00	0.245	-12.22	43.00	0.035	-29.12	70.50	0.154	-16.25
-1.25	0.930	-0.63	15.50	0.241	-12.36	43.50	0.036	-28.87	71.00	0.156	-16.14
-1.00	0.946	-0.48	16.00	0.232	-12.69	44.00	0.043	-27.33	71.50	0.158	-16.03
-0.75	0.960	-0.35	16.50	0.219	-13.19	44.50	0.053	-25.51	72.00	0.158	-16.03
-0.50	0.972	-0.25	17.00	0.203	-13.85	45.00	0.065	-23.74	72.50	0.159	-15.97
-0.25	0.982	-0.16	17.50	0.183	-14.75	45.50	0.078	-22.16	73.00	0.159	-15.97
0.00	0.990	-0.09	18.00	0.160	-15.92	46.00	0.091	-20.82	73.50	0.158	-16.03
0.25	0.995	-0.04	18.50	0.136	-17.33	46.50	0.103	-19.74	74.00	0.157	-16.08
0.50	0.999	-0.01	19.00	0.110	-19.17	47.00	0.114	-18.86	74.50	0.155	-16.19
0.75	1.000	0.00	19.50	0.084	-21.51	47.50	0.125	-18.06	75.00	0.154	-16.25
1.00	0.999	-0.01	20.00	0.060	-24.44	48.00	0.134	-17.46	75.50	0.151	-16.42
1.25	0.996	-0.03	20.50	0.040	-27.96	48.50	0.142	-16.95	76.00	0.149	-16.54
1.50	0.991	-0.08	21.00	0.033	-29.63	49.00	0.150	-16.48	76.50	0.146	-16.71
1.75	0.984	-0.14	21.50	0.043	-27.33	49.50	0.155	-16.19	77.00	0.143	-16.89
2.00	0.974	-0.23	22.00	0.061	-24.29	50.00	0.160	-15.92	77.50	0.139	-17.14
2.25	0.963	-0.33	22.50	0.079	-22.05	50.50	0.163	-15.76	78.00	0.135	-17.39
2.50	0.949	-0.45	23.00	0.096	-20.35	51.00	0.165	-15.65	78.50	0.131	-17.65
2.75	0.934	-0.59	23.50	0.111	-19.09	51.50	0.166	-15.60	79.00	0.127	-17.92
3.00	0.917	-0.75	24.00	0.122	-18.27	52.00	0.165	-15.65	79.50	0.122	-18.27
3.25	0.898	-0.93	24.50	0.131	-17.65	52.50	0.163	-15.76	80.00	0.118	-18.56
3.50	0.877	-1.14	25.00	0.137	-17.27	53.00	0.160	-15.92	80.50	0.113	-18.94
3.75	0.854	-1.37	25.50	0.140	-17.08	53.50	0.156	-16.14	81.00	0.108	-19.33
4.00	0.830	-1.62	26.00	0.139	-17.14	54.00	0.151	-16.42	81.50	0.103	-19.74
4.25	0.805	-1.88	26.50	0.136	-17.33	54.50	0.144	-16.83	82.00	0.097	-20.26
4.50	0.778	-2.18	27.00	0.130	-17.72	55.00	0.137	-17.27	82.50	0.092	-20.72
4.75	0.749	-2.51	27.50	0.121	-18.34	55.50	0.130	-17.72	83.00	0.086	-21.31
5.00	0.720	-2.85	28.00	0.110	-19.17	56.00	0.121	-18.34	83.50	0.080	-21.94
5.25	0.689	-3.24	28.50	0.097	-20.26	56.50	0.113	-18.94	84.00	0.074	-22.62
5.50	0.658	-3.64	29.00	0.083	-21.62	57.00	0.104	-19.66	84.50	0.069	-23.22
5.75	0.626	-4.07	29.50	0.067	-23.48	57.50	0.094	-20.54	85.00	0.063	-24.01
6.00	0.593	-4.54	30.00	0.050	-26.02	58.00	0.085	-21.41	85.50	0.056	-25.04
6.25	0.559	-5.05	30.50	0.032	-29.90	58.50	0.076	-22.38	86.00	0.050	-26.02
6.50	0.525	-5.60	31.00	0.014	-37.08	59.00	0.068	-23.35	86.50	0.044	-27.13
6.75	0.491	-6.18	31.50	0.005	-46.02	59.50	0.061	-24.29	87.00	0.038	-28.40
7.00	0.456	-6.82	32.00	0.022	-33.15	60.00	0.055	-25.19	87.50	0.032	-29.90
7.25	0.421	-7.51	32.50	0.039	-28.18	60.50	0.052	-25.68	88.00	0.025	-32.04
7.50	0.387	-8.25	33.00	0.055	-25.19	61.00	0.052	-25.68	88.50	0.019	-34.42
7.75	0.353	-9.04	33.50	0.069	-23.22	61.50	0.054	-25.35	89.00	0.013	-37.72
8.00	0.319	-9.92	34.00	0.083	-21.62	62.00	0.058	-24.73	89.50	0.006	-44.44
8.25	0.285	-10.90	34.50	0.094	-20.54	62.50	0.063	-24.01	90.00	0.000	---
8.50	0.252	-11.97	35.00	0.104	-19.66	63.00	0.070	-23.10			
8.75	0.220	-13.15	35.50	0.112	-19.02	63.50	0.078	-22.16			

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